

REMARKS/ARGUMENTS

Reconsideration of this application is requested. Claims 1-8 and 11 will be pending in the application subsequent to entry of this Amendment.

Information Disclosure Statement

As a preliminary matter, attention is directed to the Information Disclosure Statement filed September 15, 2009 directing attention to the documents identified and discussed in it. Note also that the relevant fee for consideration of \$180 has been paid, so even though it is filed after the mailing date of the current Official Action (which is not a Final Rejection) it is appropriate to enter and consider the documents identified in the IDS

Claims Examined // Claims Amended/Deleted

It appears that the Official Action is based upon an examination of claims 1-15 in the application as published. In fact, counsel filed a Preliminary Amendment with the original application papers providing a new set of claims. The electronic file shows this IDS was received on May 24, 2006.

Applying the examiner's comments directed to claims 13 and 14 (items 1-4 of the Official Action) "use" claims 9 and 10 have been deleted. Claims 12-15 were effectively deleted by the Preliminary Amendment and that is reaffirmed in the above instructions.

Response to Non-Statutory Obviousness-Type Double Patenting

Original claims 1-15 stand provisionally rejected on the grounds of non-statutory obviousness-type double patenting as being unpatentable over the claims of co-pending application 10/579,923 [now pending in Art Unit 1794 with Examiner Salvatore]; *see* items 5-6 of the Official Action.

In order to advance examination submitted herewith is a Terminal Disclaimer resolving this provisional rejection.

Response to Prior Art-Based Rejection

The balance of the Official Action deals with a single prior art-based rejection stated in items 7-10 of the examiner's Letter.

All pending claims are rejected as being "obvious" in view of EP 0352069 (Micropore). As the examiner notes, this document concerns heat absorbent materials and it is specifically directed to a fire blanket. The main embodiment is a safe with a layer of gelatin incorporated.

Applicants agree with the examiner that EP '069 "fails to expressly suggest that the composite is used in the protection of explosive or projectiles". The Official Action goes on to refer to this comment as "this appears to be intended use". It does not "appear" to be intended use -- in fact the claim is directed to a method and it is *actual* use of carrying out the method, namely *covering* at least part of the entity with a barrier of water gel of the type stated in claim 1. These are method claims not composition claims or article claims and the active steps involved in the method must necessarily be taken into consideration when assessing patentability. It appears that this has not been done in the current Official Action.

Applicant's claim 1 is directed to a method for protecting an entity from the effects of an explosion or contact with projectiles such as bullets. The idea is to cover the entity with the specified water gel material. It is submitted that preventing fire and protection from shockwave, shrapnel and bullets are completely different from protecting an object from a fire.

The Examiner appears to argue that where a firearm is used there is an ignition and hence you would want a fire retardant present such as a fire blanket. Any person knowledgeable about firearms would know that firearms today do not cause fires. The ignition in a fire arm takes place within the firearm in a carefully controlled manner. Not since the time of gunpowder and muskets have firearms caused fires. There is no danger of fire from firearms in the 21st century. That is simply not true.

Even if there is a risk of fire, apparently the Examiner is suggesting that one would have a fire retardant present just in case a fire started. You would have a fire extinguisher or perhaps a fire blanket somewhere near by just in case. You would not be using the fire blanket to actually protect an entity from the bullet.

Applicant's idea is to protect an entity from explosion and projectiles by covering that entity in the gel. The examiner appears to be suggesting one would want to coat a firearm in applicant's gel. If so that is far fetched. Indeed, taken to its logical conclusion, the argument is that any fire retardant could be used as a barrier to an explosion. Perhaps the most common fire retardant known is carbon dioxide foam and a bullet will not be slowed by carbon dioxide foam.

The present invention is really about the incredible innovation that the claimed materials absorb the impact of an explosion such as shockwave, shrapnel or a projectile. The flexible nature of the water gel means that the gel is able to reflect the shockwave caused by an explosion

or a projectile back onto the incoming projectile. This annihilates it. Applicant has shown in her Examples that barriers of this invention are remarkable.

In Example 1, a 20 mm thick (i.e. about an inch) gelatine barrier using a concentration of 90 g/L of gelatin withstood 65 kPa of pressure. Glass breaks at around 1.5 kPa and building cladding fails at around 30 kPa. Buildings collapse at around 70 kPa. So a barrier which is essentially an inch thick gel is an incredibly effective armour.

The other examples detail various ballistic tests applicant has carried out. Example 3 shows that the gels stop .22 bullets using only a 15 cm thick gel.

The material used in the claimed method is basically concentrated "JELLO". The examples demonstrate that this material is remarkable at stopping explosive shockwave and bullets. No one skilled in the art or otherwise would consider it obvious that JELLO could be used in a bullet-proof vest or as a skirt on a ship or as building cladding. No one skilled in the art or otherwise would expect that a material which appears soft and flexible would actually withstand 65 kPa of pressure.

The present invention is truly ground breaking. Military thinking has always been that armour must be hard. US vehicles in Iraq and Afghanistan are now very heavily armoured. Armour is heavy and makes the vehicles slow. Applicant suggests that vehicles could be clad with the gel material which is much lighter. Effective protective armour can be gel like and more effective per unit weight than conventional armour plating. That is not suggested in Micropore which concerns a fire blanket.

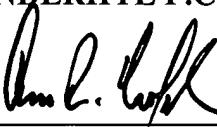
For the above reasons it is respectfully submitted that all pending claims define inventive subject matter. Reconsideration and allowance are solicited. Should the examiner require further information, please contact the undersigned.

LEIVESLEY
Appl. No. 10/580,402
October 19, 2009

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____


Arthur R. Crawford
Reg. No. 25,327

ARC:eaw
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100